Paper No. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID A. HUGHES and ALAN SALDINGER

Appeal No. 2001-1911
Application No. 08/825,492

HEARD: August 14, 2002

Before THOMAS, JERRY SMITH and RUGGIERO, Administrative Patent Judges.

THOMAS, Administrative Patent Judge.

DECISION ON APPEAL

Appellants have appealed to the Board from the examiner's final rejection of claims 1 through 3, 5 through 8, 14 through 16, 18 through 22 and 24 through 26.

Representative claims 1 and 21 are reproduced below:

1. A method for merging partially filled ATM cells, comprising the steps of:

removing a first partially filled ATM cell from an ATM cell stream;

removing a second partially filled ATM cell from the ATM cell stream; and

merging the first partially filled ATM cell and the second partially filled ATM cell into a third ATM cell having a header that includes information indicative of a merging method used.

21. An ATM cell, comprising:

a payload including information from two or more partially filled ATM cells; and

a header including information indicative of a merging method used to construct the ATM cell.

The following reference is relied upon by the examiner:

Takashima 5,509,007 Apr. 16, 1996

Claims 1 through 3, 5 through 8, 14 through 16, 18 through 22 and 24 through 26 stand rejected under 35 U.S.C. § 112, first paragraph, with the examiner's analysis focusing upon the written description portion thereof. Claims 21, 22, and 26 stand rejected under 35 U.S.C. § 101 as being directed to nonstatutory subject matter. Finally, claims 1 through 3, 5 through 8, 14 through 16, 18 through 20, 24 and 25 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Takashima. The answer incorrectly includes claims 21, 22 and 26 in this rejection under

35 U.S.C. § 102, since it has been set forth in the final rejection as not including claims 21, 22 and 26.

Rather than repeat the positions of the appellants and the examiner, reference is made to the brief and reply brief for appellants' positions and to the final rejection and the answer for the examiner's positions.

OPINION

As embellished upon here, we sustain the rejection of the noted claims on appeal under 35 U.S.C. § 101 and 35 U.S.C. § 102 respectively, but reverse the rejection of the claims on appeal under the first paragraph of 35 U.S.C. § 112.

Turning first to the rejection of the claims under the written description requirement of the first paragraph of 35 U.S.C. § 112, it is clear to us from our study of the written description, including the initially filed claims and drawings, that appellants possessed within 35 U.S.C. § 112, first paragraph, the subject matter of the claims on appeal pertaining to language of each of the respective independent claims 1, 14 and 21 on appeal of the ATM cell having "a header that includes information indicative of a merging method used." Independent claim 21 goes on to add to this feature of the method being "used to construct the ATM cell."

In essence, we are in general agreement with the positions on this issue advocated by appellants in the brief and reply brief. From an artisan's perspective, the logical connection identification information mentioned in the original and amended abstract, the summary of the invention at page 5, lines 16 through 18 of the specification as filed as well as at page 7, lines 9 and 10 indicate to the artisan that this is well known in the art as Virtual Channel Information otherwise known as VCI. This understanding is independently confirmed by the teaching in the paragraph bridging columns 1 and 2 of Takashima, the reference relied upon by the examiner's basis for the rejection under 35 U.S.C. § 102. This VCI information is a part of the header of the ATM cells. In fact, Fig. 2 of the disclosed invention shows VCI=a and VCI=b comprising the headers of the respective cells 30 and 32 to be merged into the new cell 38 comprising a separate header 40 encompassing VCI=c information.

The entire discussion of this figure at specification page 7, line 6 through page 9, line 6 confirms the statements made by appellants in the brief and reply brief as to the merging methods of each of the independent claims on appeal. In fact, the definition of the header 40 in the merged cell 38 shown in

Fig. 2 indicates in the sentence bridging pages 7 and 8 of the specification as filed that it may contain the number of partial cells contained in the merged cell as well as delineation information indicating the boundaries of the respective original cells in the final merged cell. Correspondingly, the sentence bridging pages 8 and 9 of the specification as filed specifically states that the "VCI of the merged cell . . . could be used to represent the merging method." Corresponding teachings are also found in the middle paragraph at page 10 of the specification as filed as well as originally filed claims 3 and 12. Thus, it is readily apparent to us that the artisan would have well appreciated that appellants contemplated that the header of the claimed ATM cells would have included an indication of the merging method to the extent broadly recited in independent claims 1, 14 and 21 on appeal. As such, the examiner's rejection under 35 U.S.C. § 112, first paragraph, as to this feature of all claims on appeal must be reversed.

Turning next to the rejection of claims 21, 22 and 26 under 35 U.S.C. § 101, we will sustain this rejection for the reasons set forth by the examiner in the final rejection and answer. The examiner's initial reasoning in the final rejection characterized the subject matter of independent claim 21 as encompassing a mere

data format, whereas this reasoning is expanded upon in the answer as characterizing the subject matter of this claim as being directed merely to a data structure per se.

Ample precedent exists in our view to sustain this rejection of the examiner. Diamond v. Diehr, 450 U.S. 175, 185, 209 USPQ 1 (1981) identified three classes of subject matter that do not qualify as section 101 statutory subject matter to include: laws of nature, natural phenomena, and abstract ideas. Like the examiner, we consider the subject matter of independent claim 21 as being directed to an abstract idea per se in the form of a data structure. Essentially, In re Warmerdam, 33 F.3d 1354, 1361-62, 31 USPQ2d, 1754, 1760 (Fed. Cir. 1994) held that a "data structure" is not a machine or otherwise within the statutory subject matter of section 101. More recently, the Court of Appeals for the Federal Circuit in State Street Bank & Trust Co. v. Signature Fin. Group, Inc., 149 F.3d 1368, 1374, 47 USPQ2d 1596, 1601 (Fed. Cir. 1998), indicated in disfavoring an earlier test used in determining patentable subject matter that "a process, machine, manufacture, or composition of matter employing a law of nature, natural phenomenon, or abstract idea is

patentable subject matter even though a law of nature, natural phenomenon, or abstract idea would not, by itself, be entitled to such protection."

As basically reasoned by the examiner, we find that the subject matter embraced by the claimed ATM cell per se of claim 21 on appeal sets forth a data structure or an abstract idea which does not fall within the statutory categories of a process, machine, manufacture or composition of matter of 35 U.S.C. § 101. Claim 21 merely claims, broadly, a header and a payload, both of which are well known in the art as revealed by our study of the specification as filed as well as the disclosure of Takashima. Claim 21 recites the ATM cell itself, as a mere data structure or a mere representation of data per se. Moreover, this recited ATM cell in claim 21 is not a physical structure or a manufacture within 35 U.S.C. § 101. The ATM cell of claim 21 is not used in a merging method, as recited in independent claim 1 on appeal, nor is it used in an apparatus or machine as in the network of independent claim 14 on appeal.

It is thus apparent that we are unpersuaded by appellants' arguments in the brief and reply brief as to this issue. Appellants' recognition of PTO policy at pages 6 and 7 of the principal brief on appeal as set forth in MPEP section 2106,

etc., is noted. However, appellants' invitation for us to expand upon the stated policy in this section of the MPEP is inappropriate since we do not set policy. We remain unpersuaded therefore as well of appellants' arguments at page 2 of the reply brief that the ATM cell of claim 21 is more than just a mere data structure. The claim itself does not recite anything more than a data structure even though we recognize that it is capable of being "used" to convey information in certain mediums, none of which has been recited as structural elements or methods in claim 21 itself. We disagree with appellants' view that the ATM cell of claim 21 is a physical thing and that it is an article. Therefore, we sustain the rejection of independent claim 21 and dependent claims 22 and 26.[1]

Finally, we also sustain the rejection of claims 1 through 3, 5 through 8, 14 through 16, 18 through 20, 24 and 25 under 35 U.S.C. § 102 for the reasons stated by the examiner in the final rejection as amplified in the answer. Significantly, page

[1] We note in passing that the subject matter of dependent claim 22 should apparently depend from dependent claim 26 rather than independent claim 21, since there is no antecedent basis in claim 21 for the claimed information indicative of the number of partially filled ATM cells recited in claim 22, but such is defined in dependent claim 26.

3 of the final rejection makes specific reference to Figs. 15, 18 through 20 and 28 through 31 as well as various corresponding columns in Takashima that discuss these figures.

Equally significant is appellants' admission in the middle of page 5 of the principal brief on appeal that Takashima does disclose the merging of two or more ATM cells into a new ATM cell in the discussion with respect to Fig. 15 at column 10. It is not understood how appellant can recognize here that Takashima teaches that Takashima's header information indicates the number of merged cells or the data boundary of those cells according to the teachings at column 10 and the showing of Fig. 15 of Takashima and yet argue that this teaching does not indicate "a merging method" to the extent broadly recited in independent claims 1 and 14 on appeal. As indicated earlier in this opinion with respect to our discussion of the reversal of the rejection of the claims under the first paragraph of 35 U.S.C. § 112, appellants' methodology clearly encompasses both by indicating, in the preamble or the header of the disclosed ATM cell, the ability to indicate the number of merged cells and their respective data boundaries. Significantly, there is also no methodology per se recited in representative independent claim 1 on appeal. Nor are we persuaded by appellants' argument at

page 2 of the reply brief that the language of representative independent claim 1 on appeal of "a merging method" found in the header of the merged ATM cell is more than just information including the number of cells in the merged cells. Again, there is no recitation of any additional information in representative independent claim 1 on appeal according to any methodology.

The discussion of the second embodiment beginning at column 9 and the discussion thereof relative to Fig. 13 of Takashima indicates that a plurality of known ATM cells such as "cells 1, 2, etc." are specifically taught to be merged into a new cell labeled as cell #A. The discussion at column 10 indicates that the header information indicates the number of cells in the combined cell as well as data length information therein which permits determination of the allocation of positional information with respect to each of the old cells that have been merged. Similar teachings associated with the fourth embodiment of column 12 indicate that the VCI information of the header of that embodiment indicates prefixing information associated with respect to the methodology as recited in representative independent claim 1 on appeal. Figs. 28 through 31 and their corresponding discussion beginning at column 14 of Takashima indicates the use of a plurality of different types of

headers which clearly teach as well various methodologies to the extent broadly recited in representative independent claim 1 on appeal.

In conclusion, we have reversed the rejection of all of the claims on appeal under the first paragraph of 35 U.S.C. § 112. We have sustained the rejection of independent claim 21 under 35 U.S.C. § 101 and of its dependent claims 22 and 26 since no arguments have been presented in the brief and reply brief as to the features recited in these two dependent claims. Finally, we have also sustained the rejection of independent claim 1 on appeal under 35 U.S.C. § 102 as a representative claim of all the claims rejected thereunder.[2] As to this rejection, no argument is presented as to any other claim on appeal. Since our affirmance of the examiner's rejection of the claims under 35 U.S.C. § 101 and 35 U.S.C. § 102 encompasses all of the claims on appeal, the decision of the examiner is affirmed.

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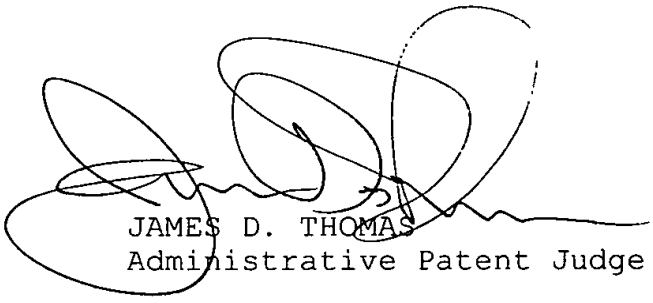
[2] Although no formal rejection was before us of claims 21, 22 and 26 under 35 U.S.C. § 102, it should be apparent to the reader that in view of our extensive discussion in this opinion, the subject matter set forth in these claims would have been clearly anticipated as well by the teachings in Takashima to the extent argued in the manner corresponding to independent claims 1 and 14 had claims 21, 22 and 26 been rejected by the examiner.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED



JAMES D. THOMAS)
Administrative Patent Judge)
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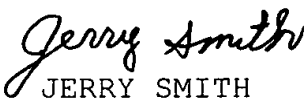
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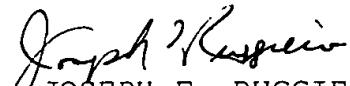
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JOSEPH F. RUGGIERO)
Administrative Patent Judge)

JDT:vsh

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TAREK N. FAHMI
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
7TH FLOOR
LOS ANGELES, CA 90025